

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in this application.

Listing of Claims:

Claims 1 and 2 (Canceled).

Claim 3 (Currently Amended): A communication apparatus for converting a frequency of received signals from a plurality of hand sets and retransmitting the signals; said communication apparatus comprising:

 a whole spectrum inverter for inverting a frequency spectrum including the received signals from the plurality of hand sets, and

 a partial spectrum inverter for inverting a frequency spectrum for each spectrum of the plurality of received signals included in the frequency spectrum; wherein

 the plurality of received signals included in the frequency spectrum inverted in the whole spectrum inverter is ~~are~~ retransmitted.

Claim 4 (Previously Presented): The communication apparatus according to Claim 3, wherein

 the partial spectrum inverter is an arithmetic signal processor.

Claim 5 (Canceled).

Claim 6 (Previously Presented): The communication apparatus according to Claim 3, wherein

 the whole spectrum inverter and the partial spectrum inverter include an arithmetic signal processor.

Claim 7 (Original): The communication apparatus according to Claim 6, wherein the partial spectrum inverter is provided before the whole spectrum inverter.

Claim 8 (Previously Presented): A frequency spectrum inversion method comprising the steps of:

sampling signals including a first reception signal having a first frequency and a second reception signal having a second frequency, both the first and second frequencies being within a specified frequency band, by a predetermined sampling frequency;

complementing sample data obtained by the sampling to convert a sampling rate; and
extracting by a bandpass filter only a spectrum of the signal, generated by the sampling, whose frequency spectrum is inverted out of frequency spectrums after the conversion of the sampling rate so as to extract a second transmission signal having a third frequency corresponding to the first reception signal and a first transmission signal having a fourth frequency corresponding to the second reception signal, both the third and fourth frequencies being within a specified frequency band.

Claim 9 (Previously Presented): A frequency spectrum inversion method comprising the steps of:

sampling signals including a first reception signal having a first frequency and a second reception signal having a second frequency, both the first and second frequencies being within a specified frequency band, by a predetermined sampling frequency;

decimating sample data obtained by the sampling to convert a sampling rate; and
extracting by a bandpass filter only a spectrum of the signal, generated by the conversion of the sampling rate, whose frequency spectrum is inverted so as to extract a second transmission signal having a third frequency corresponding to the first reception signal and a first transmission signal having a fourth frequency corresponding to the second reception signal, both the third and fourth frequencies being within a specified frequency band.

Claim 10 (Previously Presented): A frequency spectrum inversion method comprising the steps of:

sampling signals including a first reception signal having a first frequency and a second reception signal having a second frequency, both the first and second frequencies being within a specified frequency band, by a predetermined sampling frequency;

setting part of the sample data obtained by the sampling to zero; and

extracting by a bandpass filter or lowpass filter only a spectrum of the signal, generated by setting part of the sample data obtained by the sampling to zero, whose frequency spectrum is inverted so as to extract a second transmission signal having a third frequency corresponding to the first reception signal and a first transmission signal having a fourth frequency corresponding to the second reception signal, both the third and fourth frequencies being within a specified frequency band.

Claim 11 (Previously Presented): A storage medium, storing a computer readable program that is executed by a computer,

wherein said program includes instructions for executing the frequency spectrum inversion method according to claim 8.

Claim 12 (Previously Presented): A storage medium, storing a computer readable program that is executed by a computer,

wherein said program includes instructions for executing the frequency spectrum inversion method according to Claim 9.

Claim 13 (Previously Presented): A storage medium, storing a computer readable program that is executed by a computer,

wherein said program includes instructions for executing the frequency spectrum inversion method according to Claim 10.

Claim 14 (Previously Presented): The frequency spectrum inversion method according to Claim 8; wherein

a value obtained by subtracting the first frequency from the fourth frequency is equal to a value obtained by subtracting the second frequency from the third frequency.

Claim 15 (Previously Presented): The frequency spectrum inversion method according to Claim 9; wherein

a value obtained by subtracting the first frequency from the fourth frequency is equal to a value obtained by subtracting the second frequency from the third frequency.

Claim 16 (Previously Presented): The frequency spectrum inversion method according to claim 10; wherein

a value obtained by subtracting the first frequency from the fourth frequency is equal to a value obtained by subtracting the second frequency from the third frequency.

Claim 17 (Currently Amended): A communication apparatus comprising:

a receiver for receiving a signal having a first frequency within a transmission frequency band as a first reception signal from a first hand set and a signal having a second frequency within the transmission frequency band as a second reception signal from a second hand set,

a whole spectrum inverter for inverting in a lump a frequency spectrum including the first and second reception signals so that the first reception signal is converted to a second transmission signal having a third frequency within a reception frequency band and the second reception signal is converted to a first transmission signal having a fourth frequency within the reception frequency band, and

a transmitter for transmitting the second transmission signal from the whole spectrum inverter to the second hand set and the first transmission signal from the whole spectrum inverter to the first hand set; wherein

a value obtained by subtracting the first frequency of the first reception signal transmitted by the first ~~hand~~ hand set from the fourth frequency of the first transmission signal transmitted to the first hand set is equal to a value obtained by subtracting the second frequency of the second reception signal transmitted by the second hand set from the third frequency of the second

SAWA et al.

Appl. No. 09/729,169

Response to Office Action dated June 23, 2005

transmission signal transmitted to the second hand set in order to achieve a fixed duplex interval communication between the first and second hand sets.